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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/624,504

07/23/2003

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7590

12/11/2006

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EXAMINER

MCNALLY, DANIEL

ART UNIT

PAPER NUMBER

1733

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,504

Applicant(s)

HARDWICK ET AL.

Examiner

Daniel McNally

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 15-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 15-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected articles, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on October 24, 2006.
2. Applicant's election with traverse of claims 1-14 in the reply filed on October 24, 2006 is acknowledged. The traversal is on the ground(s) that Inventions I, II and III have similar features present in all claims and examination of all claims 1-33 would not be a serious burden. It is noted that separating Inventions II and III is improper and claims 15-33 should be examined together. In any event the restriction between the method, Invention I claims 1-14, and product, Inventions II and III claims 15-33, is proper and maintained. The product, Inventions II and III, can be made by another and materially different process, such as a process using a roller having protrusions rather than a mold press or a process using more than two composite board plies to make the core a desired thickness.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-10 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruggie et al. [US5887402] in view of Holt [US-5417788] and Dit Picard et al. [US5858512].

Ruggie et al. discloses a method of making a core component that can be used in a building structure such as a door. Ruggie discloses forming the core component using elevated heat and pressure in a mold press. However, Ruggie does not disclose the mold press having a plurality of protrusions. Ruggie discloses forming the core material from a single sheet or laminating multiple boards together as required by claim 1 (column 10, lines 24-35). After laminating the boards together Ruggie discloses routing the material to form areas of different thickness rather than molding the different thicknesses in a mold press.

Holt discloses a method of making a door panel comprising a core and coversheets or doorskins. The method comprises using a mold press to form depressions in the core material so that the core material has areas of highly compressed material (column 1, lines 48-67). The mold press of Holt comprises an upper and lower mold, with each mold comprising a molding plate or "die" provided with protuberances or "protrusions." During the pressing step the core material between the protrusions is compressed (column 2, line 54 – column 3, line 28).

Holt discloses compressing a core material of honeycomb structure. Holt does not suggest compressing a core material made of wood composite and it is unclear if one can expect the same results of compressed areas in the core material if a wood composite was used in place of the honeycomb material. In any event, Dit Picard et al.

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shows making a mat of cellulosic fibers such as wood pulp comprising a step of compressing zones in the mat to form areas of higher density by using a pressing roller with protruding parts. Dit Picard teaches that pressing areas of a wood composite core material will result in compressed areas of high density.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the molding press Ruggie to include protuberances or "protrusions" as taught by Holt and to use the modified mold to form compressed areas, in the multi layered core material of Ruggie, between the protuberances as taught by Holt and Dit Picard in order to increase the rigidity of the core material by creating areas of higher density and in order to eliminate the routing step.

With regard to claim 2, Holt discloses parts of the core between the protuberances are pressed flat (column 3, lines 15-20). Dit Picard shows the compressed zones of high density below the protrusions (1) as seen in Figure 1. These references also show compressed portions adjacent to the non-compressed portions as required by claim 6.

With regard to claim 3, Ruggie discloses a core component comprising contours or channels on both sides of the core having a depression bottom and inclined depression walls extending from the major plane (column 3, lines 45-54).

With regard to claims 4, 5 and 7, Ruggie discloses the thin segments or "high density portions" having a thickness range that includes 1/4 inch as recited in claim 5, and an example core thickness of about 1-1/8 inch (column 6, lines 58-67). Claim 7 requires a thickness of about 1 inch, which one skilled in the art would assume 1-1/8

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inch to be. In any event, it is within the scope of the invention that Ruggie's thickness maybe less than 1 inch if the door is smaller in thickness, therefore Ruggie meets the requirement of claim 7. Ruggie does not disclose a specific gravity for a compressed high density portion of the core. However it is intrinsic that Ruggie's core after being compressed as taught by Holt and Dit Picard will have the same specific gravity as the claimed invention because Ruggie's material, starting thickness of claim 7, and "compressed" thickness of claim 5 are the same as the claimed invention.

With regard to claim 8, Holt discloses molding plates or "upper and lower dies" both with protuberances or "protrusions" (column 2, line 54 – column 3, line 28). Figure 2 shows the protuberances (13) aligned on the top and bottom molding plates.

With regard to claims 9 and 10, Ruggie discloses using a variety of materials for the core component including soft board (column 8, lines 58-63). Ruggie also discloses the core component as sound insulation for a door (column 11, lines 15-25). Ruggie also discloses laminating multiple fiberboards together to make a desired thickness. Preferably the boards are manufactured at a thickness of 3/8 inch and it is within the scope of the invention to laminate the boards together to make a thickness of 0.7 to 0.8 inch (column 10, lines 24-35).

With regard to claims 12, 13 and 14, Ruggie discloses pressing the core component for a time within the range of 20 seconds to 20 minutes, which meets the claimed pressing time requirements (column 9, lines 52-60).

5. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ruggie et al. in view of Holt and Dit Picard et al. as applied in paragraph 4 above, and further in view of Sandison [US6413364].

Ruggie, as modified, discloses a method of making a core component. The applicant is referred to paragraph 4 above for a detailed discussion of Ruggie, as modified. The references used in paragraph 4 disclose a dry method for making a wood fiber mat used as door insulation. However, the references do not disclose the fiber mat as resin-free.

Sandison discloses a method of making a wood fiberboard from recycled wood fibers. The disclosed method makes the wood fiberboard without use of a resin adhesive. Rather than using a resin as an adhesive, the reference discloses relying on the lingo-cellulosic quality of the wood fibers (column 2, lines 28-34)

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of the references used in paragraph 4 by making the wood fiber mat using a resin-free process as taught by Sandison in order to reduce manufacturing cost by eliminating the cost of resin.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goodman [US4643787] discloses a method of using a mold press to form a rigid core material used as insulation in a door.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel McNally whose telephone number is (571) 272-2685. The examiner can normally be reached on Monday - Friday 8:00AM-4:30PM.

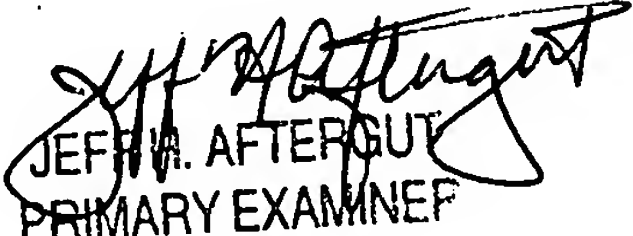
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Daniel McNally
Examiner
Art Unit 1733

dpm
November 28, 2006



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